

Arizona Public Service Company

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SAN FRANCISCO

August 6, 1987

Ms. Lisa Haage, Assistant Regional Counsel  
Office of Regional Counsel  
U. S. Environmental Protection Agency  
Region IX  
215 Fremont Street  
San Francisco, California 94105

Re: Request for Information, T-4-2  
19th Avenue Landfill, Phoenix, Arizona

Dear Ms. Haage:

This letter responds to yours dated May 4, 1987, wherein you requested information about waste management practices at four facilities owned and operated by Arizona Public Service Company (APS). Your request was in connection with an inquiry into the disposal of hazardous substances at the 19th Avenue Landfill in Phoenix, Arizona.

APS is an investor-owned electric public utility that serving more than 450,000 customers throughout the state of Arizona. APS came into existence in its present corporate form in 1952. Your Request for Information was specifically directed at the Cholla, Ocotillo, and Saguaro Power Plants and the so-called 501 Building. Because APS is headquartered in Phoenix, our evaluation included three additional facilities located in the Phoenix area. These additional facilities are the West Phoenix Power Plant, located at approximately 43rd Avenue and Buckeye Road in Phoenix; the Deer Valley maintenance and support facility located at 2121 W. Cheryl Drive, Phoenix, Arizona; and the Peoria equipment shipping and storage facility located at 12175 North 91st Avenue, Peoria, Arizona.

A review of the waste disposal practices at these additional facilities reveals that, to the best of our knowledge, the Deer Valley and the Peoria storage Yard did not dispose of any wastes at the 19th Avenue Landfill. Accordingly, these facilities are not discussed further in this letter. It does appear that the West Phoenix Power Plant may

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have disposed of some trash at the 19th Avenue Landfill, so it is discussed in the answers to specific questions below.

As there are a number of landfills in the Phoenix area, this correspondence assumes that the 19th Avenue Landfill is as described in a map sent to Mr. Craig J. Reece of APS from Claire Tiedeman of Region IX. This 19th Avenue Landfill is bounded on the south by the Salt River, on the east by 15th Avenue, on the north by Lower Buckeye Road, and on the west by 19th Avenue. There is also a "Cell A-1" located south of the southeast corner of the landfill and on the center to southern boundary of the river.

In an effort to respond to your letter, APS searched for records and interviewed a number of past and present employees. Through this investigation, it was possible to arrive at the following general conclusions about past waste disposal practices based on the recollections of the employees and the records that were located.

APS has no knowledge that any of its facilities disposed of hazardous substances in the 19th Avenue Landfill during the period from 1957 through 1979 except as described below. Discarded paper trash, putrescible garbage and debris from the construction and renovation of buildings owned by APS were disposed of in the 19th Avenue Landfill. No chemical analyses were made of these materials.

Electrical capacitors and transformer oil filters were among the items disposed of in the 19th Avenue Landfill. It is probable that some of these materials contained polychlorinated biphenyls (PCBs), but there are no records concerning whether they did in fact contain PCBs. Prior to 1979, most capacitors that could not be used were sent to scrap metal dealers, but it appears that some were disposed of as ordinary trash. It is estimated that a maximum of only one or two dozen per year would have been discarded in a landfill.

APS has developed an extensive chemical waste control program that tracks the generation and disposal of hazardous waste and solid waste that could affect human health and the environment. The Company began developing formal control programs in the late 1970's. Since that time, APS' waste control programs have been continually expanded and improved to meet and exceed applicable legal requirements and industry standards. As a result of this program, APS has good information on the disposition of waste products in the more recent past.

The exact nature of the waste streams described in this letter and the disposal methods employed from 1957 through 1979 cannot be determined with the same accuracy as for current practices. There are a number of reasons for the lack of documentation or specific recollection. First of all, there were no legal or business reasons to subject ordinary trash and construction debris, which were normally the only items disposed of in landfills, to chemical analysis prior to disposal. Second, any records that may have existed apparently have not been retained. Because of the expense and complexity of managing the enormous quantities of documents produced in the public utility business, is not feasible to retain documents for more than three to six years, depending on the type of document, unless required by government regulation. There were no regulatory requirements to keep documents relating to solid waste disposal prior to 1979. Even the current regulations do not typically require retention of records for more than three years. Finally, the few APS facilities that did produce chemical waste generated small quantities that could be managed without disposal in a landfill.

The answers to your specific questions are listed below. Information regarding the Cholla Power Plant and the Saguaro Power Plant is not provided here because that information has already been provided in connection with the Hassayampa Landfill investigation and there is no information indicating that those facilities sent wastes of any kind to the 19th Avenue Landfill. Both of those plants are located a significant distance from the Phoenix area. The disposal of asbestos materials generated at those facilities and disposed of at the Hassayampa Landfill in 1980 was due to special circumstances described in the Hassayampa Landfill response that do not apply here.

1. Provide a description of the nature of your business and the processes used at the facilities referenced above. Include a detailed description of any hazardous waste generation, storage, treatment, or disposal operations.

Response:

Ocotillo Power Plant

The Ocotillo Power Plant, located in Tempe, Arizona, consists of two steam electric generating units, each having a net generating capability of approximately 115 megawatts. The primary fuel for these units is natural gas

with an alternate fuel capability of fuel oil. The Ocotillo Plant also has two gas turbine units, each having an approximate net generating capability of 51 megawatts. The fuel for these units is natural gas.

For a description of the waste streams produced at this facility and the typical disposal methods, see the response to question 5 below.

#### West Phoenix Power Plant

Although this facility was not identified in your letter, it will be included here because it is discussed in detail in this response. The West Phoenix Power Plant, located at approximately 43rd Avenue and Buckeye Road in Phoenix, is a steam electric generating station. This plant has been substantially modified over the years, but presently consists of three steam electric generating units having approximate individual net generating capabilities of 30 megawatts, 12 megawatts and 63 megawatts. The primary fuel for these units is natural gas with an alternate fuel capability of fuel oil. This plant also has two gas turbine electric generating units, each having a net generating capacity of approximately 51 megawatts. Primary fuel for these units is natural gas with an alternate fuel capability of fuel oil. This plant also has three combined cycle electric generating units, each having an electric generating capacity of approximately 85 megawatts. The primary fuel is natural gas, with an alternate fuel capability of fuel oil.

For a description of the waste streams produced at this facility and the typical disposal methods, see the response to question 5 below.

#### 501 Building

The "501 Building" is a maintenance and operations support facility located at 501 South Second Avenue, Phoenix. The major operations of this facility include vehicle repairs, painting, a carpentry shop and various types of maintenance for Company equipment.

For a description of the waste streams produced at this facility and the typical disposal methods, see the response to question 5 below.

2. Provide the length of time your facilities have been in operation at the locations referenced above and the dates of operation and locations of any other of your facilities in the Phoenix area.

Response:

The following facilities have been in operation since the respective dates indicated below. The Ocotillo and West Phoenix Power Plants are peak load stations that operate primarily during the summer months. These plants provide reserve capacity during the remainder of the year.

Ocotillo Power Plant

The steam units at the Ocotillo Power Plant commenced commercial operation on March 1, 1960, and June 1, 1960. The gas turbine units commenced commercial operation on May 27, 1972 and July 13, 1973.

West Phoenix Power Plant

The original units of the West Phoenix Power Plant, which have since been dismantled and replaced with other units, commenced operation in 1930. The existing steam units commenced commercial operation on July 12, 1948, July 23, 1949 and April 12, 1950. The gas turbine units commenced commercial operation on May 30, 1972 and July 13, 1973. The combined cycle units commenced commercial operation on June 24, 1976.

501 Building

The 501 Building site was used by one of APS' predecessors as early as 1928. APS acquired the facility in 1952.

APS has had a number of offices and customer service centers in the Phoenix area over the years. The precise dates of operation and locations of these facilities has not been determined. The Peoria storage yard referred to earlier began operation in 1963. The Deer Valley facility referred to earlier began operation in 1962.

3. For each hazardous substance generated by your company at your facilities and taken to the 19th Avenue Landfill for disposal, provide a description of:

- a. The common chemical name, specific chemical name, and chemical composition by volume or weight;
- b. The total amount, in gallons for liquids and tons for solids; and
- c. The date of disposal of the substance.

Response:

APS has no knowledge of disposing of any hazardous substances at the 19th Avenue Landfill. It is possible that capacitors and transformer oil filters disposed of in the Landfill contained PCBs, but there are no records of such disposal, as it was sporadic and infrequent.

4. Provide a written description for all other substances used or generated by your company at any of its facilities which were taken to the 19th Avenue Landfill. For each substance provide the information requested in question 3(a) through 3(c).

Response:

The materials deposited in the 19th Avenue Landfill by APS consisted of paper trash, putrescible garbage, shredded foliage, miscellaneous debris from the construction and renovation of buildings and scrap wire and other metals that could not be recycled, scrap capacitors that could not be repaired or recycled and a variety of miscellaneous objects. Chemical analyses were not performed on these wastes. There are no records of the quantity of substances taken to the 19th Avenue Landfill and there are no records of the disposal of such substances.

5. Provide a description of all waste streams from your facilities and the typical disposal methods during the period from 1957 through 1979. Include information for those waste streams which were recycled or treated prior to disposal.

Response:

Ocotillo Power Plant

This facility is not known to have disposed of any wastes at the 19th Avenue Landfill.

The majority of the waste streams at the Ocotillo Power Plant during this time period were aqueous wastes which

were typically managed on-site. Boiler cleaning wastes and fireside wash were disposed of on-site in an evaporation pond where they were neutralized. Water purification demineralizer resin regenerants were disposed of on-site in a leach bed after neutralization. Cooling tower blowdown and boiler blowdown were discharged either to the municipal sewer or to an on-site surface impoundment.

Both the resin regenerants and the boiler cleaning wastes were found to exhibit the characteristic of corrosivity under the hazardous waste rules that became effective in 1980. The evaporation pond and leach bed where these wastes had been disposed of were included in a RCRA Part A permit application filed with the Arizona Department of Health Services and the EPA on November 19, 1980. This surface impoundment and the leach bed have since completed closure and were certified closed on June 25, 1985.

Small volumes of waste solvents, normally less than 50 gallons per month, were typically burned on-site in the utility boilers or mixed with used oil. Waste oil was either burned on-site or sold for recycling.

Debris from the construction or renovation of buildings was discarded in local landfills in the vicinity of the plant. Some wood and paper debris were retained on-site and burned during fire brigade training exercises.

#### West Phoenix Power Plant

By volume, the majority of the waste streams at the West Phoenix Power Plant were aqueous wastes which were typically managed on-site. Combined cycle cooling tower blowdown was discharged to the municipal sewer. Steam unit cooling tower blowdown, boiler blowdown from the steam units, and blowdown from steam heaters was typically discharged to a nearby lateral to the Salt River Project irrigation canal for reuse. Water from the gas turbine air inlet coolers was often recycled to the cooling tower or managed in a surface impoundment on-site. Water purification resin regenerants, which consists of acid and base solutions, were neutralized on-site and discharged to the municipal sewer. Wastes from infrequent cleaning of the boilers were acid and base solutions that were neutralized on-site in a surface impoundment.

Debris from the construction or renovation of buildings was discarded in local landfills. Some wood and paper debris

were retained on-site and burned during fire brigade training exercises.

#### 501 Building

The 501 Building is a maintenance facility that contains a number of operational support functions including vehicle repair shops, a paint shop, carpentry services, equipment repair and other miscellaneous activities. Waste oil and solvents generated by these activities were typically mixed together and sold to off-site recyclers.

The 501 Building also housed various electrical equipment repair facilities until the Deer Valley facility opened in 1962. Repairable electrical equipment was returned to service. Non-repairable equipment was sold to scrap metal dealers as often as possible. Some equipment was discarded and disposed of in the 19th Avenue Landfill. Used transformer oil was usually returned to service and, occasionally, sold to used oil recyclers.

A grease trap located in the vehicle repair shop was typically cleaned by a pumping service on a periodic basis. Very small quantities of paint, varnishes, sealers, etc. that were infrequently collected were typically discarded along with general trash.

6. Describe the waste treatment processes which were used at your facilities. Identify the source of the waste streams that were treated. Describe the chemical composition and characteristics of: a) the influent, b) the effluent, and c) any sludges, scum, or other concentrated waste produced in the treatment processes.

#### Response:

There were no waste treatment processes at any APS facilities other than that associated with activities described in the answer to question 5 above and question 7 below.

7. Describe the cleaning products used to clean equipment at your facilities, and give the dates of their use. Provide the brand name, chemical composition, and disposal history for each product. Specifically, your answer should include a description of those products used in equipment cleaning, tank cleaning, pit cleaning, or part cleaning.



Response:

The boilers at the Ocotillo and West Phoenix power plants were cleaned with solutions containing citric acid, ammonium hydroxide, sodium bromate and dilute hydrochloric acid. Following on-site neutralization, the aqueous residue from these cleaning operations was disposed of in an evaporation pond at the Ocotillo Plant until 1984. Thereafter, the wastes were disposed of in the Tempe municipal sewer system. Similar wastes at the West Phoenix Power Plant were managed on-site in a surface impoundment or discharged into the municipal sewer system.

There are no records showing the actual composition and quantities of cleaning solvents that were used at the facilities in question between 1957 and 1979. Based on the available records and the recollection of employees concerning solvents currently in use and those used in the past, it is believed that the Ocotillo and West Phoenix Power Plants used solvents containing various concentrations of 1,1,1-trichloroethane, methylene chloride, perchloroethylene, aliphatic hydrocarbons and aromatic hydrocarbons. Waste solvent and oils were typically burned in the boilers at the plants. On occasion, some solvent may have been mixed with used oil that was sold to oil recyclers. There is no reason to believe that solvents were ever sent to the 19th Avenue Landfill.

The power plants used industrial soaps and detergents to clean the exterior of facilities. There is no disposal information on these products, although they were probably disposed through on-site drainage systems.

The 501 Building used aliphatic hydrocarbons as cleaning solvents. The small quantities of used solvents that were collected were mixed with used oil that was sold to oil recyclers.

8. Provide a list of where, other than the 19th Avenue Landfill, your facilities disposed of wastes from 1957 until 1979. Specify both the type of waste disposal facility (e.g., sanitary sewer, land disposal facility, on-site disposal, etc.), and, if appropriate, the name and address of the facility. Describe all waste streams taken to the waste disposal facilities and the typical disposal methods. Include information for those waste streams which were recycled or treated prior to disposal.

Response:

The wastes disposed of in landfills as described above for the period from 1957 until 1979 were typically sent to the following facilities:

Ocotillo Power Plant

Various types of wastewaters were disposed of in on-site evaporation ponds, or in the Tempe municipal sewer system, or recycled on-site in the cooling tower. Waste oils and solvents that were not recycled were burned on-site in the utility boilers. APS has no knowledge that any waste from the Ocotillo Plant was sent to the 19th Avenue Landfill.

West Phoenix Power Plant

Wastewaters were disposed of in a lateral to the Salt River Project canal near the plant, reused by a farmer for irrigation purposes on adjacent property, sent to the Phoenix municipal sewer system, managed in on-site surface impoundments or recycled in the cooling tower. Waste oil and solvents that were not recycled were burned on-site in the utility boilers.

501 Building

Trash and garbage was taken to various landfills near the Salt River.

9. Provide the names and addresses of all transporters used by your company to transport materials to the 19th Avenue Landfill, and the means and the contractual arrangements made for such transport. Also, provide a list of employees directly involved with the transportation or disposal of such materials.

Response:

APS has not contracted with third parties specifically for the purpose of disposing of wastes at the 19th Avenue Landfill. It is possible that bins of ordinary trash collected by contractors were taken to the 19th Avenue Landfill, but that cannot be verified. None of the contracts relating to commercial firms hired for trash disposal activities are available for the years prior to 1979.

Other types of trash and debris generated by the Company were taken to the 19th Avenue Landfill by Company employees in the normal course of their employment. A list of those employees who can be recalled as having transported trash to the 19th Avenue Landfill between 1957 and 1979 is as follows: Royal Delk, Walt Parker and Bill Crossley.

10. Provide copies of all Material Safety Data Sheets (MSDS) available for all of the chemicals and products used or generated by your company.

Response:

Copies of the currently available Material Safety Data Sheets are being sent under separate cover because of their bulk. APS makes no implied or express representation that the materials represented on these sheets were sent to the 19th Avenue Landfill or used at any particular facility between 1957 and 1979.

11. Provide a list by insurer and policy number, identifying all comprehensive general liability and environmental impairment insurance held by your company currently and during the period from 1957 through 1979, covering personal injury and property damage to third parties, both for sudden and non-sudden accidental occurrences. In addition, specify the policy limits and expiration date for each policy.

Response:

Information about insurance policies is irrelevant to determining which persons might be potentially responsible parties for alleged contamination at the 19th Avenue Landfill. APS is willing to discuss this matter further at the appropriate time.

12. Provide an audited set of financial statements which includes a Statement of Financial Position/Balance Sheet, Income Statement, and Statement of Changes in Working Capital, and any other supplementary information for your company's most recent fiscal year.

Response:

The applicable portions of the 1986 APS 10-K Report filed with the Securities and Exchange Commission is enclosed as Attachment 1. It should be noted that the assets listed in

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those statements are dedicated to the public service pursuant to the laws of the State of Arizona and are not freely alienable.

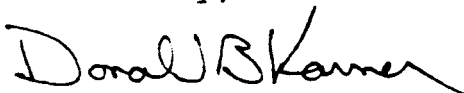
13. Provide the name(s) of the person(s) who prepared the responses to the above questions, and the name(s) of all person(s) with whom the preparer(s) consulted in order to obtain the information.

Response:

The final responses were prepared by Craig J. Reece, Esq. The preparer consulted with the following persons for the purposes of providing the information contained in this letter: Walter L. Bouchard, David Jallo, Betsy Risendal, Tom Owen, Royal Delk, Ivan Harlowe, William J. Morin, C. J. Barney, Allison Williams, Velo Oliver, Kalman Besenczky, Tom Little, Jeff Franklin, Paul Stanley, Dick Bleakley, Bill Crossly and Tom McClemore.

APS is continuing to evaluate its practices and reserves the right to supplement these answers if additional information becomes available. If you have questions or comments, please contact Mr. Craig J. Reece at (602) 250-1324.

Sincerely,



Donald B. Karner  
Vice President

DBK:rmr

Enclosures

(4658M)

THE ENVIRONMENTAL PROTECTION AGENCY

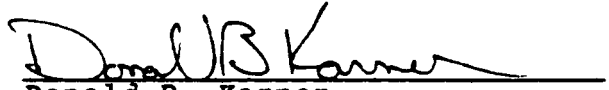
IN THE MATTER OF THE INQUIRY )  
INTO WASTE DISPOSAL AT THE ) AFFIDAVIT OF DONALD B. KARNER  
29TH AVENUE LANDFILL, MARICOPA ) ARIZONA PUBLIC SERVICE COMPANY  
COUNTY, ARIZONA )

STATE OF ARIZONA )  
 )ss.  
COUNTY OF MARICOPA )

DONALD B. KARNER, being duly sworn, deposes and says:

1. I am a vice president for Arizona Public Service Company with overall responsibility for environmental programs.
2. With respect to the attached letter to Lisa Haage, dated August 6, 1987, I have inquired of the person preparing the answers contained in said letter concerning their efforts to obtain the necessary information. I am satisfied that a diligent effort was made to provide as accurate and complete responses as are reasonable under the circumstances. I am advised that a diligent record search has been completed and that there has been a diligent interview of present and former employees who may have knowledge of operations, chemical use, and business practices. All information responsive to this request has been forwarded to the Agency.

Dated this 6th day of August, 1987.

  
Donald B. Karner  
Vice President  
Arizona Public Service Company

Subscribed and sworn to me  
this 6th day of August, 1987.

My Commission Expires July 28, 1990

\_\_\_\_\_  
Notary Public  
My commission expires:

